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Docket No.: 4590-422

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PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Valery LEBLOND *et al.*

Confirmation No. 5002

U.S. Patent Application No. 10/539,621

Filed: June 17, 2005

For: METHOD OF PROCESSING AN ANALOG SIGNAL AND DEVICE FOR  
IMPLEMENTING THE METHOD

## International Preliminary Examination Report

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed is an International Preliminary Examination Report regarding the above-identified application.

Respectfully submitted,

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*571-273-8300*  
 FACSIMILE NUMBER

Translation

## PATENT COOPERATION TREATY

PCT/BP2003/050998

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 62954	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/050998	International filing date (day/month/year) 12 décembre 2003 (12.12.2003)	Priority date (day/month/year) 17 décembre 2002 (17.12.2002)
International Patent Classification (IPC) or national classification and IPC H04B 1/28, 1/40		
Applicant THALES		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 04 mai 2005 (04.05.2005)	Date of completion of this report 17 November 2005 (17.11.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/050998

## I. Basis of the report

1. With regard to the elements of the international application:<sup>\*</sup>

the international application as originally filed

the description:

pages \_\_\_\_\_ 1-13 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the claims:

pages \_\_\_\_\_ \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, as amended (together with any statement under Article 19)  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ 1-25 \_\_\_\_\_, filed with the letter of 19 October 2005 (19.10.2005)

the drawings:

pages \_\_\_\_\_ 1/11-11/11 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the sequence listing part of the description:

pages \_\_\_\_\_ \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_ \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/fig \_\_\_\_\_

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).<sup>\*\*</sup>

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	YES
	Claims	1-25 NO
Inventive step (IS)	Claims	YES
	Claims	1-25 NO
Industrial applicability (IA)	Claims	1-25 YES
	Claims	NO

## 2. Citations and explanations

## 1. This report makes reference to the following documents:

D1: US-A-6 085 073 (KALLMAN KURT ALBERT ET AL), 4 July 2000 (2000-07-04)

D2: US-A-5 995 556 (THOMAS JR JESS BROOKS), 30 November 1999 (1999-11-30)

2. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not meet the requirement of PCT Article 33(2) for novelty.

3. Document D1 describes (the references in parentheses are to that document, in particular to figure 1):

a process for processing an analogue signal which comprises a frequency carrier  $f_p$  and whose frequency spectrum presents over a determined bandwidth centred about the frequency  $f_p$  two main lobes separated by a frequency band of negligible power (which corresponds to the general and well known representation of a frequency-modulated signal). The process comprises a sampling stage (29) according to a determined sampling frequency (see column 2, lines 53-62, of the description) and, before the

Form PCT/IPEA/409 (Box V) (January 1994)

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sampling stage, a stage which consists in carrying out a frequency translation (10) in the two lobes so as to bring them nearer to one another and thus reduce bandwidth.

The subject matter of claim 1 is therefore not novel.

4. The subject matter of dependent claims 2-13 relates to very well known analogue signal processing techniques in the field of previously sampled digital signals. These techniques are described in documents D1 and D2, for example.

5. Dependent claims 2-13 do not contain any features which, in combination with the features of any claim to which they refer, define a subject matter which could meet the PCT novelty or inventive step requirements; see documents D1 and D2 and the corresponding passages cited in the search report.

6. The subject matter of independent claim 14 relates to an embodiment of the process as per claim 1 and has the same technical features. The subject matter of this claim is therefore not novel over document D1.

7. Dependent claims 15-25 do not contain any features which, in combination with the features of any claim to which they refer, define a subject matter which could meet the PCT novelty or inventive step requirements; see documents D1 and D2 and the corresponding passages cited in the search report.

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## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

8. Claim 1 does not meet the requirements of PCT Article 6 because the subject matter for which protection is sought is not clearly defined. The claim attempts to define its subject matter in terms of the result to be achieved, i.e. reducing bandwidth, but in doing so it merely states the problem addressed by the invention without indicating the technical features which would be necessary to achieve this result. A similar observation also applies to independent claim 14, for the same reason.
9. The features of the claims are not followed by reference signs placed between parentheses (PCT Rule 6.2(b)).
10. Contrary to PCT Rule 5.1(a)(ii), the description does not cite documents D1 and D2 or indicate the relevant prior art disclosed therein.